

WEST NILE VIRUS SURVEILLANCE IN MICHIGAN CORVIDS

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Submission of Dead Birds to DCPAH: 2001-2003

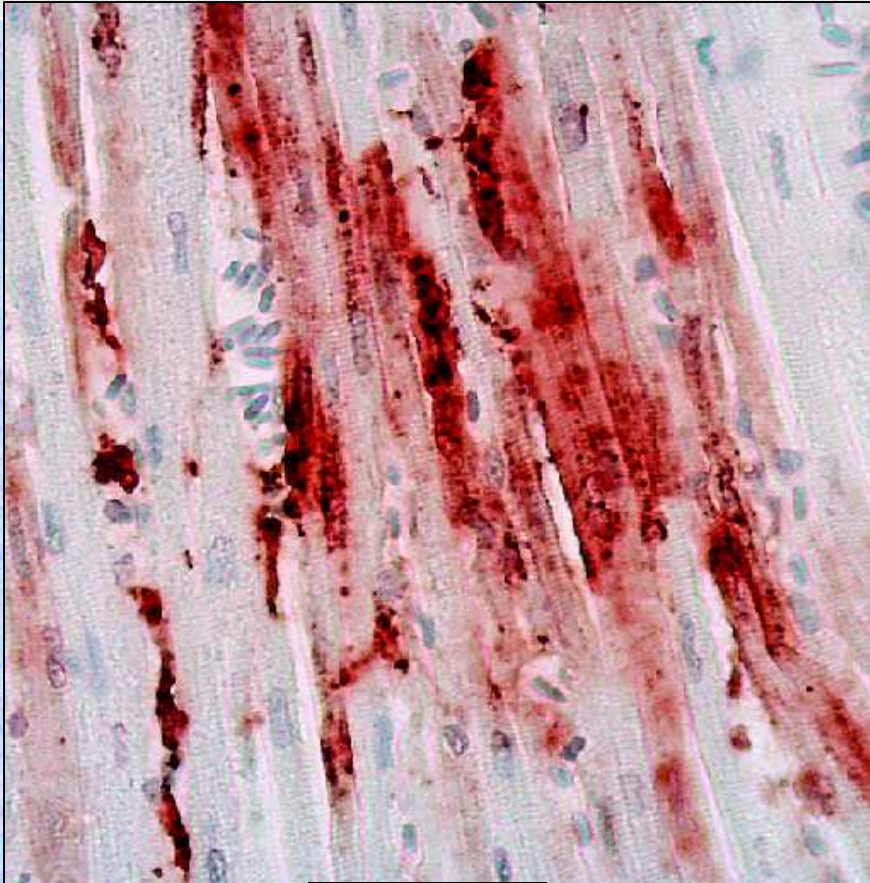


Tissue Handling and Collection

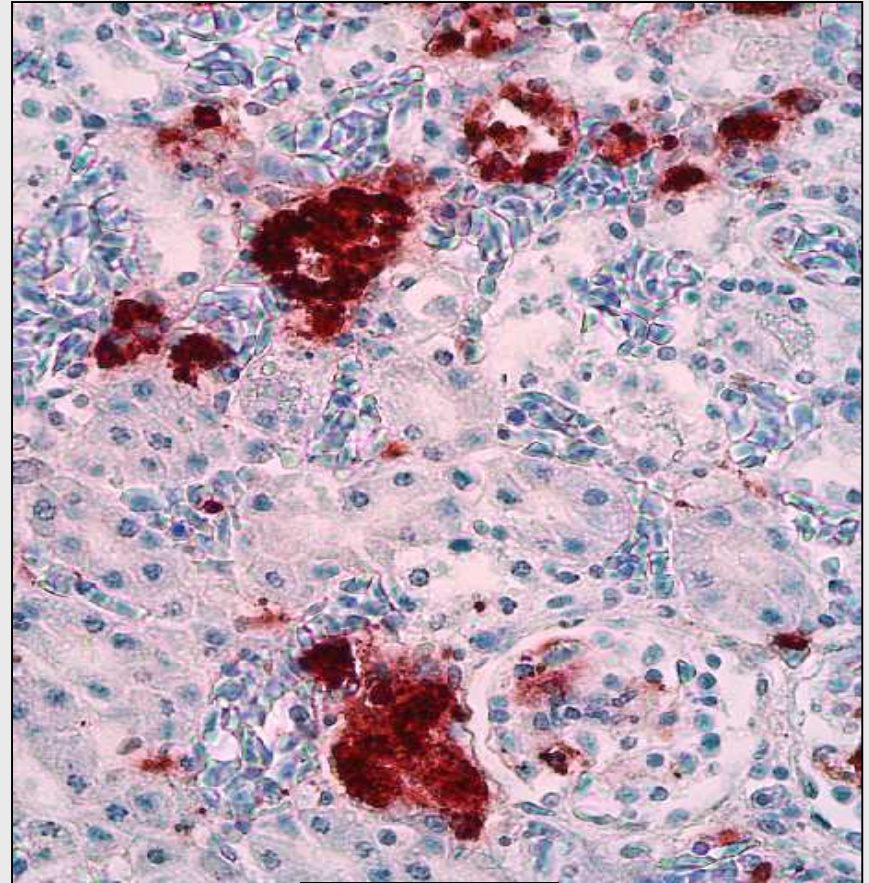
- necropsy of submitted birds in biosafety cabinet
- appropriate personal protective gear:
 - gloves
 - respirator mask
 - gown/lab coat
- collection of heart and kidney for WNV testing



Testing by Immunohistochemistry (IHC)

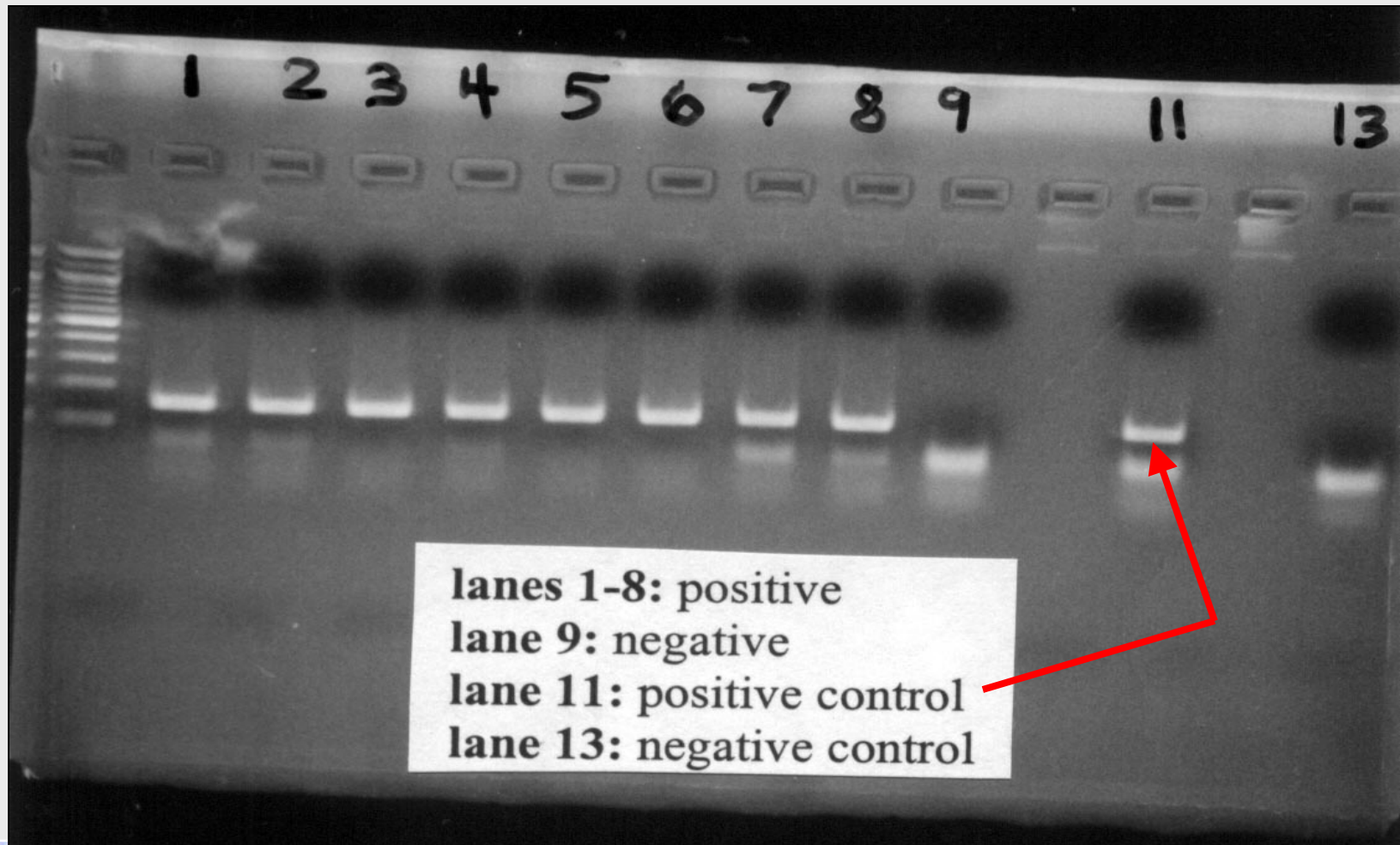


heart



kidney

Confirmation of IHC-positive Birds by RT-PCR



Comparison of IHC to VecTest™

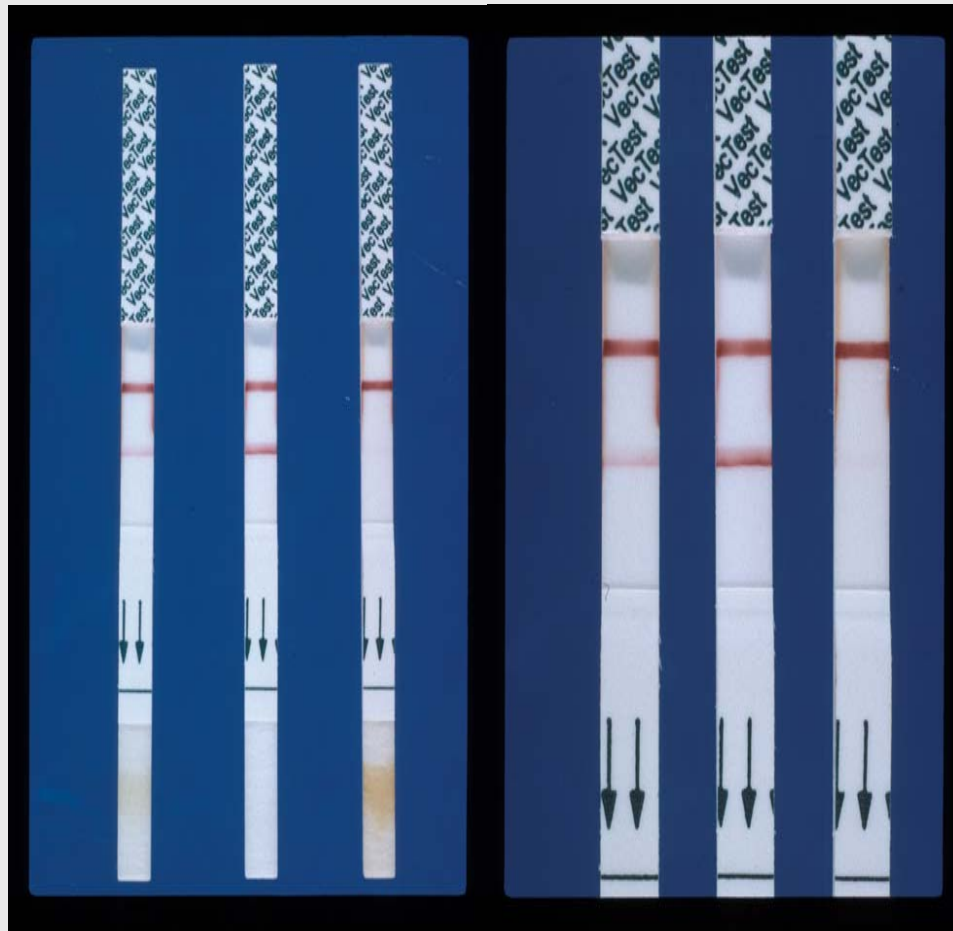
- study done by Jamee Moorman, at DCPAH
- tested 200 corvids submitted between June 1 and September 1, 2003
- oral swabs from corvids tested by VecTest™
- IHC results compared to VecTest™ results



VecTest™ Procedure

- swab the bird's oral cavity, including under the beak and under the tongue
- place the swab in buffer solution, agitate the tube, and allow the swab to set for one minute
- remove the swab from the tube, and pipette 250 µL of the solution into a clean tube
- place the dipstick indicator in the solution, and incubate for 15 minutes
- test results are interpreted as:
 - negative if only the control line is present
 - positive if a pink to red line is present in the test zone, below the control line

VecTest™ Rapid Antigen Detection Assay



weak positive, strong positive, negative

Comparison of IHC and VecTest™ Results (2003)

	IHC Positive	IHC Negative
VecTest™ Positive	35	2
VecTest™ Negative	6	157

Specificity 99.00%

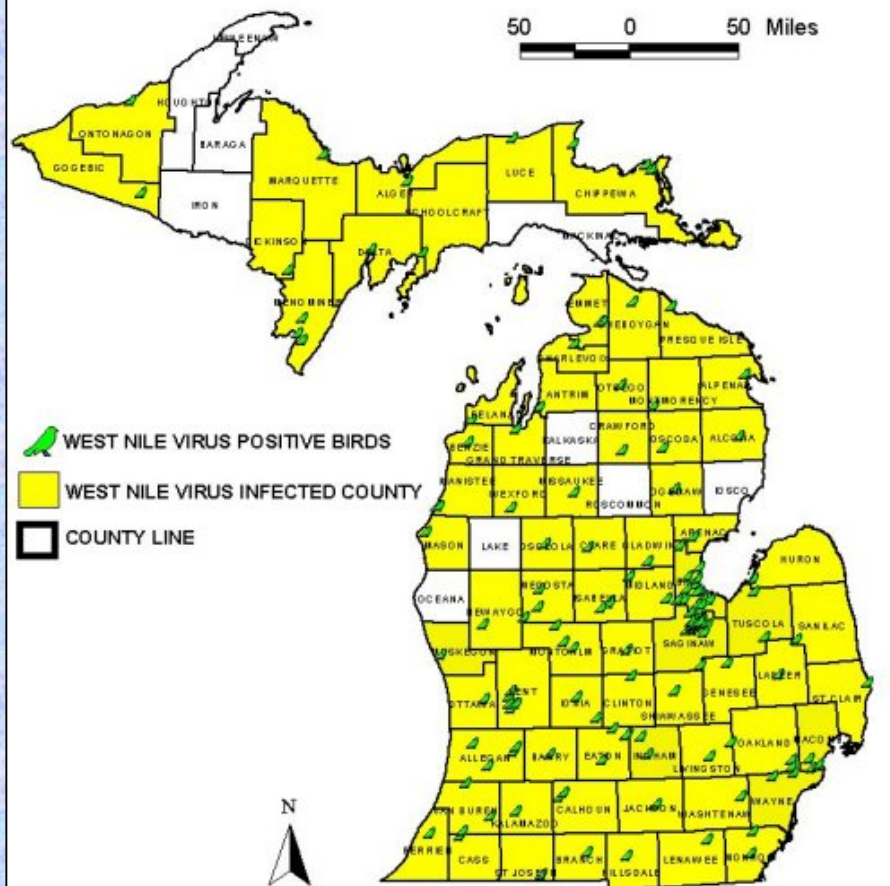
Sensitivity 85.37%

Corvid testing: 2002 vs. 2003

	2003	2002
total # of birds submitted	696	763
total # of corvids submitted	540	734
total # of corvids tested	400	568
total # of WNV(+) corvids	89	330
# of counties submitting corvids	70	80
# of counties with (+) corvids	33 (75 zip codes)	73

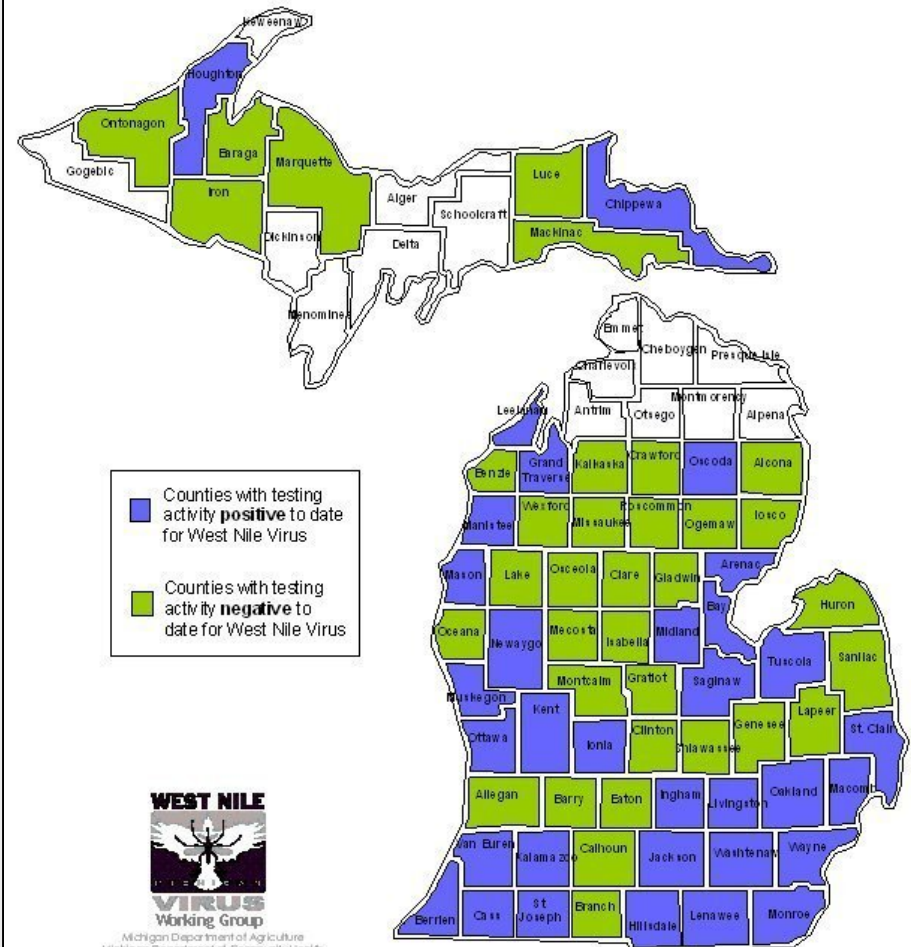
Positive corvids: 2002 vs. 2003

2002 WEST NILE VIRUS SURVEY RESULTS



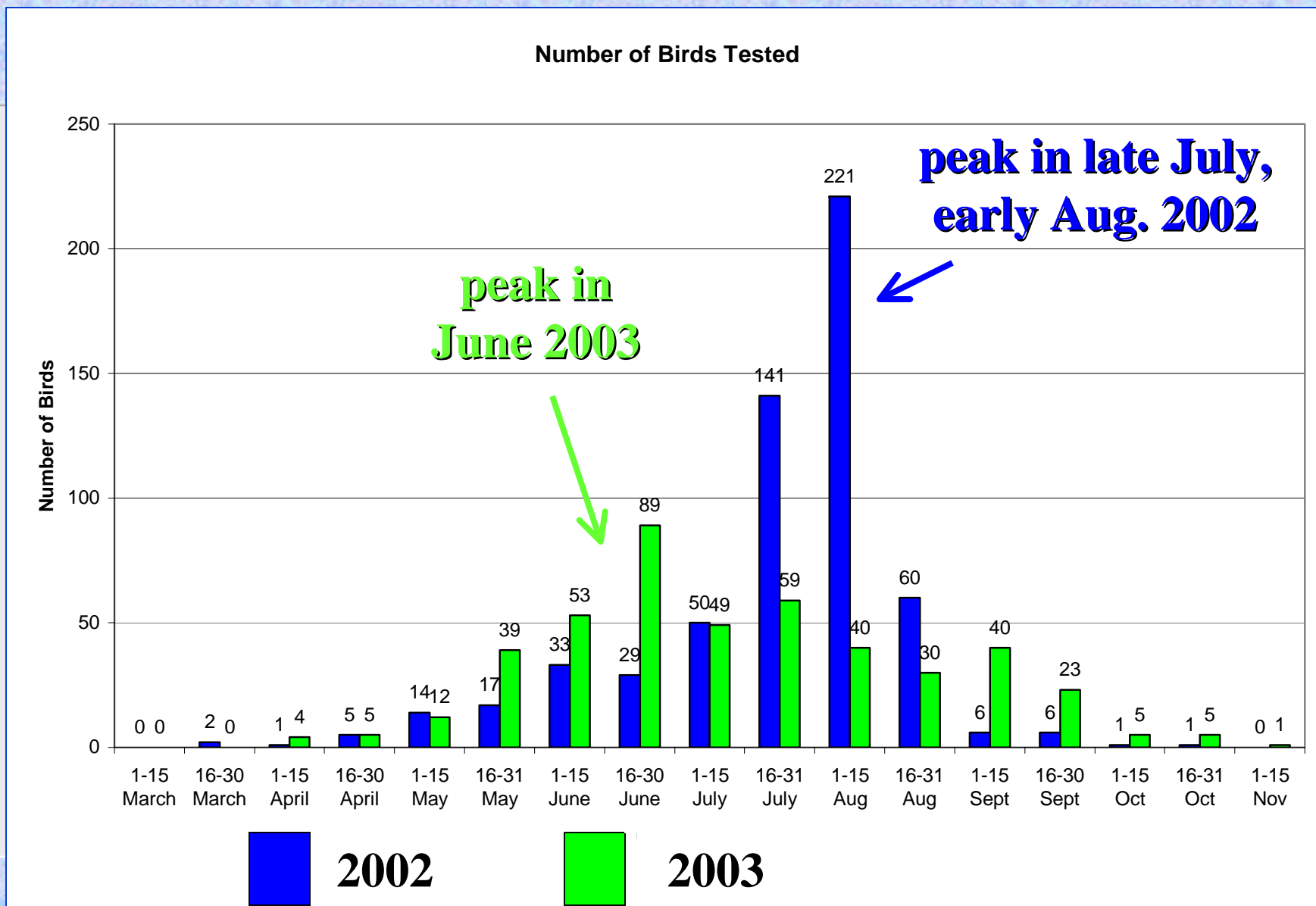
MICHIGAN DEPARTMENT OF NATURAL RESOURCES

2003 West Nile Virus Corvid Testing Results As of December 31, 2003



Michigan Department of Agriculture
Michigan Department of Community Health
United States Department of Agriculture
Michigan Department of Natural Resources
Michigan Department of Environmental Quality
Michigan State University

Bird testing: 2002 vs. 2003



Positive birds: 2002 vs. 2003

